

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of measuring the differences between a first video signal and a second video signal, said method comprising:

analyzing information content of each video signal for identifying ~~to identify~~ perceptually relevant boundaries and for disregarding perceptually irrelevant boundaries of video images depicted therein;

comparing only said perceptually relevant boundaries so defined in the first signal with those in the second signal [[,]] and disregarding said perceptually irrelevant boundaries, the comparison including determination of the extent to which the properties of boundaries defined in the first image are preserved in the second image; and

generating an output indicative of perceptual difference between the first and second signals.

2. (Previously Presented) A method as in Claim 1, in which the information content is analyzed for a plurality of boundary-identifying characteristics, and the properties of boundaries on which the comparison is based include characteristics by which such boundaries are defined in each of the signals.

3. (Previously Presented) A method as in claim 2, wherein the characteristics include the presence of edges.

4. (Previously Presented) A method as in claim 2, wherein the characteristics include the presence of disparities between frames of the same signal.

5. (Previously Presented) A method as in claim 2, wherein the characteristics include changes in at least one of the properties of: luminance, color or texture.

6. (Previously Presented) A method as in claims 1, in which the comparison includes a comparison of perceptibility of corresponding boundaries identified in the first and second signals.

7. (Previously Presented) A method as in claim 1, in which the comparison of the images includes:

identification of principal elements in each image, and

compensation for differences in relative positions of said principal elements.

8. (Previously Presented) A method as in claim 1, in which the analysis includes identification of perceptually significant image features, and the output indicative of perceptual difference between the first and second signals is weighted according to cognitive relevance of such image features.

9. (Previously Presented) A method as in claim 8, in which perceptually significant image features are those characteristic of the human face.

10. (Previously Presented) A method as in claim 9, in which weighting is applied to the output according to significance of the feature in providing visual cues to speech.

11. (Previously Presented) A method as in claim 8, in which perceptually significant image features are those by which individual text characters are distinguished.

12. (Currently Amended) Apparatus for measuring the differences between a first video signal and a second video signal, said apparatus comprising:

analysis means for processing information content of each video signal to identify perceptually relevant boundaries and for disregarding perceptually irrelevant boundaries of video images depicted therein;

comparison means for comparing only said perceptually relevant boundaries so defined in the first signal with those in the second signal^{[[,]]} and disregarding said perceptually irrelevant boundaries, the comparison including determination of the extent to which properties of boundaries defined in the first image are preserved in the second image: and

means for generating an output indicative of perceptual difference between the first and second signals.

13. (Previously Presented) Apparatus as in Claim 12, wherein:

the analysis means is arranged to analyze information content in the signals for a plurality of boundary-identifying characteristics, and

the comparison means is arranged to compare characteristics by which such boundaries are defined in each of the signals.

14. (Previously Presented) Apparatus as in claim 13, wherein the analysis means includes means to identify the presence of edges.

15. (Previously Presented) Apparatus as in claim 13, wherein the analysis means includes means to identify the presence of disparities between frames of the same signal.

16. (Previously Presented) Apparatus as in claim 13, wherein the analysis means includes means to identify differences in at least one of the properties of: luminance, color or texture.

17. (Previously Presented) Apparatus as in claim 12, in which the comparison means includes means for determining perceptibility of the boundaries identified in the first and second signals.

18. (Previously Presented) Apparatus as in claim 12, in which the comparison means includes image matching means for identifying principal elements in each image and translation means for effecting translation of one image to compensate for differences in relative positions of such elements in the first and second images.

19. (Previously Presented) Apparatus as in claim 12, in which the comparison means includes weighting means for identifying perceptually significant

image features, and weighting the output according to cognitive relevance of such image features.

20. (Previously Presented) Apparatus as in claim 12, further comprising:
visual stage means for processing original input signals to emulate the response of the human visual system and to generate modified input signals for input to the analysis means.